

In the Specification

Please amend the specification of the above referenced application as follows:

Please amend Paragraph 0028 as follows:

[0028]

In accordance with the present invention, a unilimb breathing circuit is disclosed having a proximal end coupling member, a distal end coupling member, an expiratory tube extending between the proximal and distal end coupling members, and an inspiratory tube extending between the proximal and distal end coupling members. The expiratory tube comprises a ~~corrugated~~ pleated expiratory tube that is expandable between a fully compressed rest position, and a fully expanded rest position, and has a plurality of intermediate rest positions. At the plurality of intermediate rest positions, the expiratory tube is capable of maintaining its rest length without the exertion of an external force. The inspiratory tube comprises a ~~corrugated~~ pleated inspiratory tube having a length that is variable between a fully compressed rest position and a fully expanded rest position, and includes a plurality of intermediate rest positions between the fully expanded rest position and the fully compressed rest position. The inspiratory tube, like the expiratory tube is capable of maintaining these intermediate rest positions, without the exertion of an external force.

Please amend Paragraph 0036 as follows:

[0032]

One feature of the present invention is that corrugated tubing of an accordion type is employed wherein each ~~corrugation~~ pleat is capable of being positioned in a maintainable expanded rest position and a maintainable compressed rest position. As a breathing tube is comprised of a large number of such pleats ~~corrugation~~, the tube is capable of having

a large number of rest lengths. This feature has the advantage of enabling the user to vary the working length of the tube to suit his/her particular needs. Additionally, it enables the tube to be compressed during shipment and storage to reduce the amount of space required by the tube during shipping and storage, but permits the tube to be expanded during usage, to extend to a length that accommodates the operating room personnel, and in particular, the anesthesiologist.

Please amend Paragraph 0036 as follows:

[0036] With the present invention, sizing the diameters of the expiratory tube and the inspiratory tubes becomes a significantly more difficult task. One reason that sizing is more difficult is that the outer and inner diameters of each tube will vary depending upon whether the corrugations are their compressed or extended position. It has been found generally, that the inner diameter of the expiratory tube is smaller when the expiratory tube's ~~corrugations~~ pleats are compressed, than when the corrugations are expanded. Similarly, the outer diameter of the inspiratory tube is greater when the inspiratory tube is compressed, as compared to when its ~~corrugations~~ pleats are expanded.

Please amend Paragraphs 0072 and 0073 as follows:

[0072] Fig. 30 is a side, sectional view of a second alternate embodiment breathing circuit showing the present invention employed in an extension circuit type breathing circuit; and

[0073] Fig. 31 is a side sectional view of a third alternate embodiment breathing circuit showing the present invention employed in a breathing circuit having separated non-coaxial machine end inspiratory and expiratory ports; and

Fig 32 is a plan view of an inspiratory and expiratory tube placed side by

side in their expanded position to show the relative lengths thereof when in their expanded positions.

Please amend Paragraph 0080 as follows:

[0080] The machine end connector/filter 14 includes a casing ~~18~~ 38 that defines an interior. The casing 38 includes a machine engaging end 40 to which can be attached a proximal terminal, as described in the Fukunaga's '872 patent discussed above, that connects to an anesthesia machine. Alternately, the machine engaging end 40 can be connected directly to the anesthesia machine if the anesthesia machine (not shown) contains an appropriately sized coupling and port for receiving the machine engaging end 40.

Please amend Paragraphs 0082-0084 as follows:

[0082] The machine engaging end 40 includes a first, generally cylindrical expiratory port connector 46 for defining an expiratory port 48, through which expiratory gasses can pass from the expiratory port 48 into the anesthesia machine. A first inspiratory port connector 52 is generally cylindrical, and coaxial with the first (proximal) end ~~expiratory port 47 of the expiratory tube 26~~ . The first inspiratory port is provided for being coupled to the outflow port of an anesthesia machine, and defines an interiorly disposed inspiratory port 53 through which gas, and rebreathed air can pass from the anesthesia machine into the inspiratory port.

[0083] A first expiratory tube connector is disposed at the tube engaging end 44 of the machine end connector/filter 14 ~~38~~, and includes a radially outwardly facing, axially extending cylindrical surface 57 for receiving the first (proximal) end 47 of the expiratory tube 26. The radially inwardly facing, axially extending interior surface of the proximal end 47 of the expiratory tube 26 is fixedly coupled and engaged to the radially outwardly facing surface 57 of the first expiratory tube connector 56.

Preferably, the connection between the first end 47 of the expiratory tube 26 and the radially outwardly facing surface 57 is designed to be snug and permanent to prevent a disconnect between the two. This snug, secure fixed coupling can be achieved either chemically, through the use of glue, sizing to create a snug fit, or by some mechanical attachment means such as a band or other attachment protocol, such as sonic welding.

[0084] The tube engaging end 44 of the machine end connector/~~filter 14~~³⁸ also includes a first inspiratory tube connector 58, that is sized for receiving, on its generally cylindrical, radially outwardly facing surface, the radially inwardly facing cylindrical surface of the first (proximal) end 53 of the inspiratory tube 22. The ends 53, 47 of the inspiratory tube and expiratory tubes are sized and configured for receiving the connectors 58, 56 and are often referred to as the “cuffs” of the tubes 53, 47.

Please amend Paragraphs 0086 and 0087 as follows:

[0086] It will be noted that the inspiratory tube connector 58 extends generally outwardly past the end of the inspiratory tube connector ~~58~~ 56. This additional length is provided to facilitate the manufacturing process, to make it easier to attach the first end 53 to the inspiratory tube 22 to the first end inspiratory tube connector 58.

[0087] It is important within the casing 38 to maintain the expiratory flow path ~~66~~ 70 separate from the inspiratory flow path ~~66~~ 70, as it is generally undesirable to mix the inspiratory and expiratory gasses at the machine end of the circuit 10. To this end, the casing 38 is shown to maintain the inspiratory flow path 66 separate and distinct from the expiratory flow path 70.

Please amend Paragraph 0099 as follows:

[0099]

As a further measure to help prevent disconnects of the inspiratory tube from the machine and patient end connectors, the inspiratory tube is preferably sized to be somewhat longer than the expiratory tube.

Preferably, as best shown in Fig 32, the inspiratory tube, in a standard 44 to 88 inch tube of the type described above, should be between 1 and 7 inches (2.54 to 17.8 cm) longer than the expiratory tube. Optimally, the fully extended length of the inspiratory tube 22 is approximately 4 inches (10.2 cm) greater than the fully extended length of the expiratory tube 26.

Please amend Paragraph 00122 as follows:

[00122] It should also be noted that the angle of the second leg 246 and the angle of the first leg 244 are slightly different than the angles used within the expiratory tube 26. It has been found that the second leg 246 is best positioned at an angle of about 49.6 degrees, from a plane disposed perpendicular to the axis of the inspiratory tube 22, and that the first leg is disposed at an angle of about 40.1 degrees from a plane that is disposed generally perpendicular to the axis of the inspiratory tube 22. The angle formed at the peak point, between the first and second legs 244, 246 in the inspiratory tube is greater than the angle employed in the ~~inspiratory~~ expiratory tube 22 26. These differences in angles were arrived at after significant experimentation by the applicant, and differ largely due to the differences in size between the inspiratory tube 22 and expiratory tube 26.